

Notice of Allowability

Application No.

09/869,985

Examiner

James Arnold, Jr.

Applicant(s)

RILEY ET AL.

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE filed on 30 January 2004.
2. ☒ The allowed claim(s) is/are 1-3,5-8,10 and 11.
3. ☒ The drawings filed on 9 July 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>01302004</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 30 January 2004 has been entered.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In line 1, under the heading CROSS REFERENCE TO RELATED APPLICATIONS, insert the phrase "now U.S. Patent No. 6,162,350" after the phrase "09/231,156".

In line 2, under the heading CROSS REFERENCE TO RELATED APPLICATIONS, insert the phrase "now U.S. Patent No. 6,156,695" after the phrase "08/900,389".

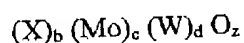
Authorization for the following examiner's amendment was given in a telephone interview with Gerard Hughes on March 16, 2004.

The Application has been amended as follows:

Delete the claims and add the new claims listed on pages 3 and 4 of the office action.

1. (PREVIOUSLY PRESENTED) A process for producing a hydrocrackate having a relatively low sulfur and nitrogen content, which process comprises:

reacting a feedstream in a single reaction stage, in the presence of a hydrogen treat gas, as it passes through two or more catalyst beds wherein the upstream most catalyst bed is comprised of a bulk multimetallic catalyst comprised of a trimetallic catalyst represented by the formula:



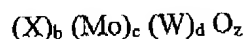
wherein X is a Group VIII non-noble metal, the molar ratio of $b:(c+d)$ is 0.5/1 to 3/1, and the downstream most is comprised of a hydrocracking catalyst, which single reaction stage is operated at a temperature of about 300 to 450°C, and hydrogen pressures from about 85 to 200 bar (1250-2915 psig), thereby resulting in a hydrocrackate being substantially lower in sulfur and nitrogen than the feedstock.

2. (PREVIOUSLY PRESENTED) The process of claim 1 wherein Group VIII non-noble metal is selected from Ni and Co.

3. (PREVIOUSLY PRESENTED) The process of claim 1 wherein the ratio of Mo to W is about 9:1 to about 1:9.

4. (CANCELED)

5. (ORIGINAL) The process of claim 1 wherein the bulk multimetallic catalyst is amorphous and has a unique X-ray diffraction pattern showing crystalline peaks at $d = 2.53$ Angstroms and $d = 1.70$ Angstroms.
6. (PREVIOUSLY PRESENTED) The process of claim 2 wherein the Group VIII non-noble metal is nickel.
7. (ORIGINAL) The process of claim 1 wherein the feedstock is hydrotreated in a first reaction stage containing one or more reaction zones and the effluent is hydrocracked in a second reaction stage, also containing one or more reaction zones.
8. (ORIGINAL) The process of claim 1 wherein the effluent from the hydrotreating stage is passed to a separation zone wherein the resulting bottoms are fed to the hydrocracking stage.
9. (CANCELED)
10. (PREVIOUSLY PRESENTED) The process of claim 1 wherein the bulk multimetallic represented by the formula:



has a molar ratio of $b:(c+d)$ of 0.75/1 to 1.5/1, more preferably 0.75/1 to 1.25/1.

11. (PREVIOUSLY PRESENTED) The process of claim 1 wherein the molar ratio of $c:d$ is preferably $>0.01/1$, more preferably $>0.1/1$, still more preferably 1/10 to 10/1, still more preferably 1/3 to 3/1, most preferably substantially equimolar amounts of Mo and W, e.g., 2/3 to 3/2; and $z = [2b + 6(c+d)]/2$.

12. (CANCELED)

Allowable Subject Matter

Claims 1-3, 5-8, and 10-11 are allowed. The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose reacting a feedstream in a single reaction stage in the presence of a hydrogen treat gas, as it passes through two or more catalyst beds wherein the upstream most catalyst bed is comprised of a bulk multimetallic catalyst comprised of a trimetallic catalyst represented by the formula $(X)_b(Mo)_c(W)_dO_z$ wherein X is a Group VIII non-noble metal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Arnold, Jr. whose telephone number is 571-272-1443. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:00 PM; Fridays from 8:30 AM-5:00 PM with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ja
March 16, 2004


Walter D. Griffin
Primary Examiner

ja
March 16, 2004